STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING											AMENDED REF	FORM 3		
APPLICATION FOR PERMIT TO DRILL										1. WELL NAME ar		IBER ost Love 15-2	5	
2. TYPE OF WORK DRILL NEW WELL (REENTER P&A WELL) DEEPEN WELL)										3. FIELD OR WILDCAT UNDESIGNATED				
4. TYPE OF WELL										5. UNIT or COMMUNITIZATION AGREEMENT NAME				
Gas Well Coalbed Methane Well: NO 6. NAME OF OPERATOR										7. OPERATOR PHONE				
EOG RESOURCES, INC. 8. ADDRESS OF OPERATOR										435 781-9111 9. OPERATOR E-MAIL				
600 17th Street Ste 1000N, Denver, CO, 80202 10. MINERAL LEASE NUMBER 11. MINERAL OWNERSHIP							P			kaylene_gardner@eogresources.com 12. SURFACE OWNERSHIP				
(FEDERAL, INDIAN, OR STATE) UTU8346 TI. MINERAL OWNERSHIP FEDERAL INDIAN (
13. NAME (OF SURFACE OW	NER (if box 12 = 'fo	ee')							14. SURFACE OV	NER P	PHONE (if box	12 = 'fee')
15. ADDRE	SS OF SURFACE	OWNER (if box 12	= 'fee')							16. SURFACE OWNER E-MAIL (if box 12 = 'fee')				
17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')					18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS YES (Submit Commingling Application) NO (1)				19. SLANT VERTICAL DIRECTIONAL HORIZONTAL					
20. LOCATION OF WELL F			FOO	TAGES		QTR-QTR		SECTION	TOWNSHIP		RANGE		MERIDIAN	
LOCATION			FNL	1550 FWL	\dashv	SENW		25	11.0 S	\dashv	21.0 E	-	S	
Top of Up			FNL	1550 FWL		SENW		25	11.0 S	\dashv	21.0 E		S	
At Total D	epth		2394	FNL	1550 FWL		SENW		25	11.0 S		21.0 E		S
21. COUNT		INTAH		2	22. DISTANCE TO NEAREST LEASE LINE (Feet) 1550			23. NUMBER OF ACRES IN DRILLING UNIT 1280						
					25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed) 13070			26. PROPOSED DEPTH MD: 8380 TVD: 8380						
27. ELEVATION - GROUND LEVEL				2	28. BOND NUMBER			29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE						
5750					NM2308 49-225 Hole, Casing, and Cement Information									
					Weight			orma	Max Mud W	/t. Cem	nn+	Sacks	Yield	Weight
String Surf	12.25	9.625	0 - 23		36.0		J-55 ST&C		0.0	Class		185	3.82	11.0
								+		Class	G	207	1.18	15.6
Prod	7.875	4.5	0 - 83	80	11.6		L-80 LT&C		10.5	Hi Lif	"G"	68	3.91	11.0
									50/50 Poz 924 1.28 14.1			14.1		
ATTACHMENTS														
VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES														
WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGI					OR ENGINEER		COMPLETE DRILLING PLAN							
AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT					(IF FEE SURFACE) FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER									
DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY I					RIZONTALLY DRI	LLED)	г торо	TOPOGRAPHICAL MAP						
NAME Mickenzie Larsen TITLE				E Re	Regulatory Administrator PHONE 435				781-9145					
SIGNATURE DATE				≣ 12	12/11/2015 EMAIL micke				enzie_larsen@eogresources.com					
API NUMBER ASSIGNED 43047555050000				ROVA	J. Defill									
				Permit Manager										

LOST LOVE 15-25

SE/NW, SEC. 25, T11S, R21E, S.L.B.&M.. UINTAH COUNTY, UTAH

1. & 2. ESTIMATED TOPS & ANTICIPATED OIL, GAS, & WATER ZONES:

FORMATION	TVD-RKB (ft)	Objective	Lithology	
Green River	563		Shale	
Birdsnest	763		Dolomite	
Mahogany Oil Shale Bed	1,269		Shale	
Wasatch	3,600	Primary	Primary Sandstone	
Chapita Wells	4,133	Primary	Sandstone	Gas
Buck Canyon	4,768	Primary	Sandstone	Gas
North Horn	5,547	Primary	Sandstone	Gas
KMV Price River	6,113	Primary	Sandstone	Gas
KMV Price River Middle	7,019	Primary	Sandstone	Gas
KMV Price River Lower	7,659	Primary	Sandstone	Gas
Sego	8,179	-	Sandstone	
TD	8,380			

Estimated TD: 8,380' or 200'± below TD Anticipated BHP: 4,575 Psig

- 1. Fresh Waters may exist in the upper, approximately 1,000 ft \pm of the Green River Formation, with top at about 2,000 ft \pm .
- 2. Cement isolation is installed to surface of the well isolating all zones by cement.

3. PRESSURE CONTROL EQUIPMENT:

Production Hole – 5000 Psig BOP schematic diagrams attached.

4. CASING PROGRAM:

CASING	Hole Size	<u>Length</u>	Size	WEIGHT	<u>Grade</u>	Thread	Rating Collapse	Factor Burst	Tensile
Conductor		0 – 60'	14"	32.5#	A252		00114650	1800 PSI	10,000#
Surface	12 1/4"	0 – 2,300' KB±	9-5/8"	36.0#	J-55	STC	2020 PSI	3520 Psi	394,000#
Production	7-7/8"	Surface – TD	4-1/2"	11.6#	N-80	LTC	6350 PSI	7780 Psi	223,000#

Note: 12-1/4" surface hole will be drilled to a total depth of 200'± below the base of the Green River lost circulation zone and cased w/9-5/4" as shown to that depth. Drilled depth may be shallower or deeper than the 2300' shown above depending on the actual depth of the loss zone.

All casing will be new or inspected.

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LOST LOVE 15-25 SE/NW, SEC. 25, T11S, R21E, S.L.B.&M.. UINTAH COUNTY, UTAH

5. Float Equipment:

Surface Hole Procedure (0'- 2300'±)

Guide Shoe

Insert Float Collar (PDC drillable)

Centralizers: 1-5' above shoe, top of jts. #2 and #3 then every 5th joint to surface. (15 total)

Production Hole Procedure (2300'± - TD):

Float shoe, 1 joint casing, float collar and balance of casing to surface. 4-½", 11.6#, N-80 or equivalent marker collars or short casing joints to be placed at top of Price River and 400' above top of Wasatch. Centralizers to be placed 5' above shoe on joint #1, top of joint #2, and every 3rd joint to 400' above the top of primary objective. Thread lock float shoe, top and bottom of float collar, and top of 2nd joint.

6. MUD PROGRAM

Surface Hole Procedure (Surface - 2300'±):

Air/air mist or aerated water.

Production Hole Procedure (2300'± - TD):

Anticipated mud weight 9.5 – 10.5 ppg depending on actual wellbore conditions encountered while drilling.

2300'±-TD A closed mud system will be utilized. A bentonite gelled water mud system will be used to control viscosity w/PHPA polymer used for supplemental viscosity and clay encapsulation/inhibition. Water loss will be maintained at <15cc's using white starch or PAC. Bactericides will be used as needed. Anticipated pH will range from 9.0-10.0. Mud weight will be adjusted as necessary for well control. Deflocculants/thinners will be used as necessary to maintain mud quality. LCM sweeps will be utilized as necessary to control lost circulation and mud loss. CO2 contamination, if encountered, will be treated with lime and gypsum.

8 point plan-EOG 2 11/23/2015

LOST LOVE 15-25 SE/NW, SEC. 25, T11S, R21E, S.L.B.&M.. UINTAH COUNTY, UTAH

7. VARIANCE REQUESTS:

Reference: Onshore Oil and Gas Order No. 1
Onshore Oil and Gas Order No. 2 – Section E: Special Drilling Operations

- o EOG Resources, Inc. requests a variance to regulations requiring a straight run blooie line to be 100' in length. (Where possible, a straight run blooie line will be used).
- o EOG Resources, Inc. requests a variance to regulations requiring the blooie line to be 100' in length. To reduce location excavation, the blooie line will be approximately 75' in length.
- EOG Resources, Inc. requests a variance to regulations, during air drilling operations only, requiring dedusting equipment. Dust during air drilling operations is controlled by water mist.
- EOG Resources, Inc. requests a variance to regulations, during air drilling operations only, requiring an automatic igniter or continuous pilot light on the blooie line. (Not required on aerated water system).
- o EOG Resources, Inc. requests a variance that compressors are located in the opposite direction from the blooie line a minimum of 100 feet from the well bore. (Air Compressors are rig mounted).

8. EVALUATION PROGRAM:

Logs: Mud log from base of surface casing to TD.

Cased-hole Logs: Cased-hole logs will be run in lieu of open-hole logs consisting of the following:

Cement Bond / Casing Collar Locator and Pulsed Neutron

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LOST LOVE 15-25 SE/NW, SEC. 25, T11S, R21E, S.L.B.&M.. UINTAH COUNTY, UTAH

9. CEMENT PROGRAM:

<u>Surface Hole Procedure (Surface - 2300'±):</u>

Lead: 185 sks Class "G" cement with 16% Gel, 10 #/sx Gilsonite, 3% Salt, 2% CaCl₂,

3 lb/sx GR3 ¼ #/sx Flocele mixed at 11 ppg, 3.82 ft³/sk. yield, 23 gps water.

Tail: 207 sks Class "G" cement with 2% CaCl₂, ¼#/sk Flocele mixed at 15.6 ppg, 1.18 ft³/sk.,

5.2 gps water.

Top Out: As necessary with Class "G" cement with 2% CaCl₂, ¼#/sk Flocele mixed at 15.6

ppg, 1.18 ft³/sk., 5.2 gps water.

Note: Cement volumes will be calculated to bring lead cement to surface and tail

cement to 500'above the casing shoe.

Production Hole Procedure (2300'± - TD)

Lead: 68 sks: Hi-Lift "G" w/12% D20 (Bentonite), 1% D79 (Extender), 5% D44

(Salt), 0.2% D46 (Antifoam), 0.25% D112 (Fluid Loss Additive), 0.25 pps D29

(cello flakes) mixed at 11.0 ppg, 3.91 ft³/sk., 24.5 gps water.

Tail: 924 sks: 50:50 Poz "G" w/ 2% D20 (Bentonite), 0.1% D46 (Antifoam), 0.075%

D13 (Retarder), 0.2% D167 (Fluid Loss Additive), 0.2% D65 (Dispersant),

mixed at 14.1 ppg, 1.28 ft³/sk., 5.9gps water.

Note: The above number of sacks is based on gauge-hole calculation.

Lead volume to be calculated to bring cement to 200'± above 9-5/8" casing shoe. Tail volume to be calculated to bring cement to 400'± above top of Wasatch.

Final Cement volumes will be based upon gauge-hole plus 45% excess.

LOST LOVE 15-25 SE/NW, SEC. 25, T11S, R21E, S.L.B.&M.. UINTAH COUNTY, UTAH

10. ABNORMAL CONDITIONS:

Surface Hole (Surface - 2300'±):

Lost circulation

Production Hole (2300'± - TD):

Sloughing shales, lost circulation and key seat development are possible in the Wasatch Formation.

11. STANDARD REQUIRED EQUIPMENT:

- A. Choke Manifold
- B. Upper and Lower Kelly Cock
- C. Stabbing Valve
- D. Visual Mud Monitoring

12. HAZARDOUS CHEMICALS:

No chemicals subject to reporting under SARA title III in an amount equal to or greater than 10,000 pounds will be used, produced, stored, transported, or disposed of annually in association with the drilling of this well. Furthermore, no extremely hazardous substances, as defined in 40 CFR 355, in threshold planning quantities, will be used, produced, stored, transported, or disposed of in association with the drilling of this well.

13. Air Drilling Operations:

- 1. Main Air Compressors are 1250 CFM 350 psi with 2000 psi Boosters and are rig mounted.
- 2. Secondary Air Compressors are 1170 CFM 350 psi with 2000 psi Boosters and are rig mounted.
- 3. Minimum setting depth of conductor casing will be 60' GL or 10'± into competent formation, whichever is deeper, as determined by the EOG person in charge. Exceptions must be approved by an EOG drilling superintendent or manager.
- 4. The diameter of the diverter flow line will be a minimum of 10" to help reduce back pressure on the well bore during uncontrolled flow.
- 5. Rat and Mouse hole drilling will occur only after surface casing has been set and cemented.
- 6. EOG Resources, Inc. will use a properly maintained and lubricated stripper head.

(Attachment: BOP Schematic Diagram)

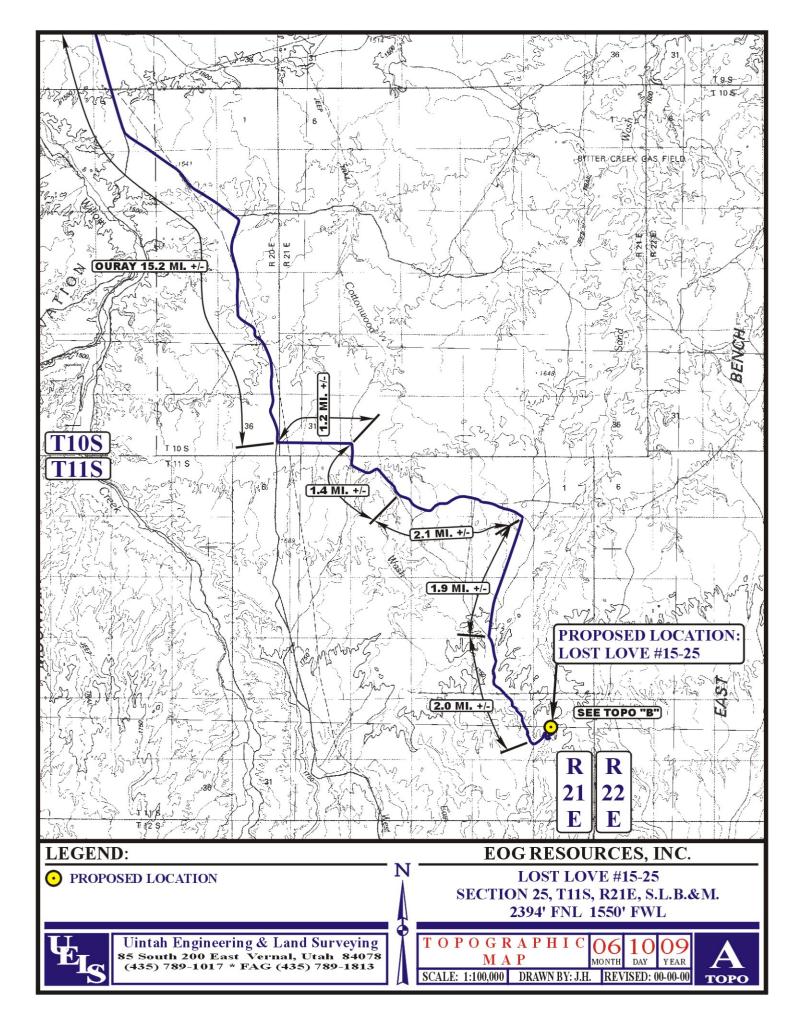
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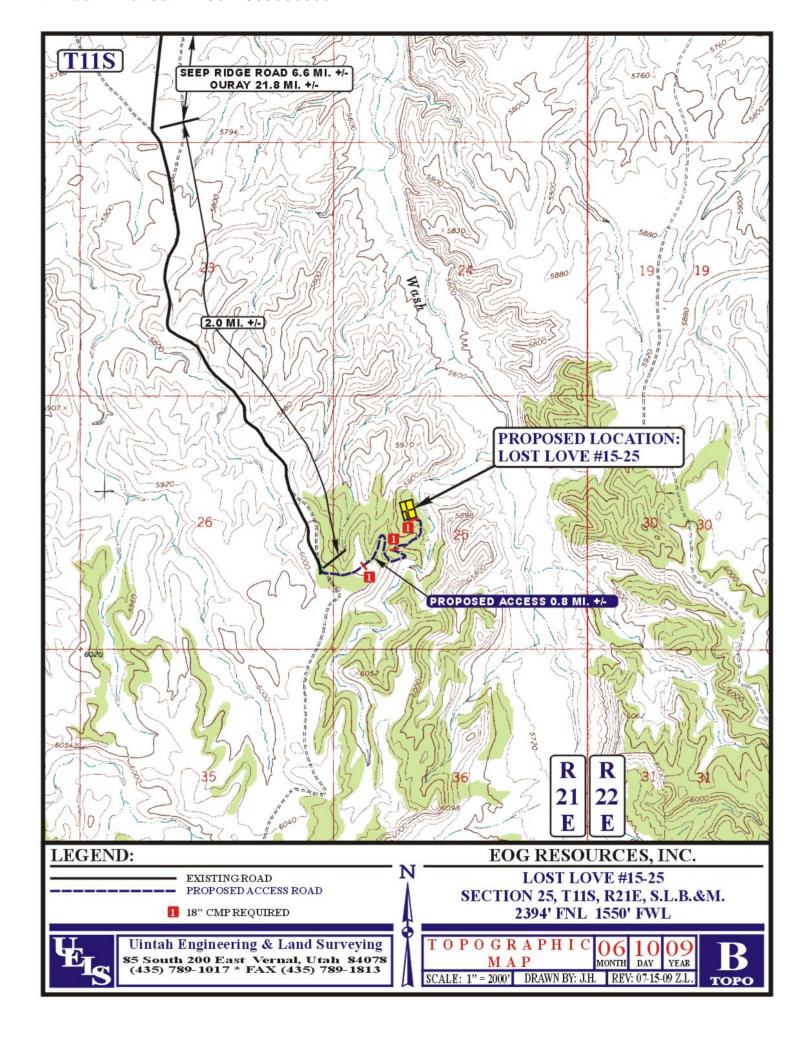
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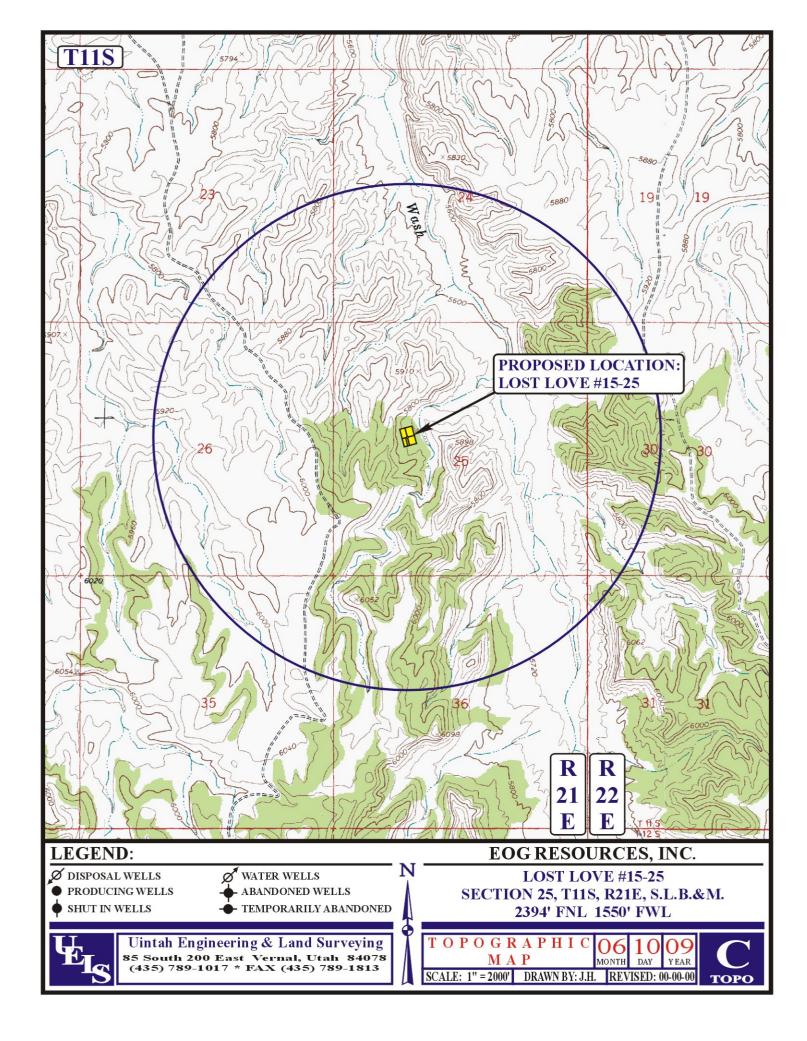
EOG

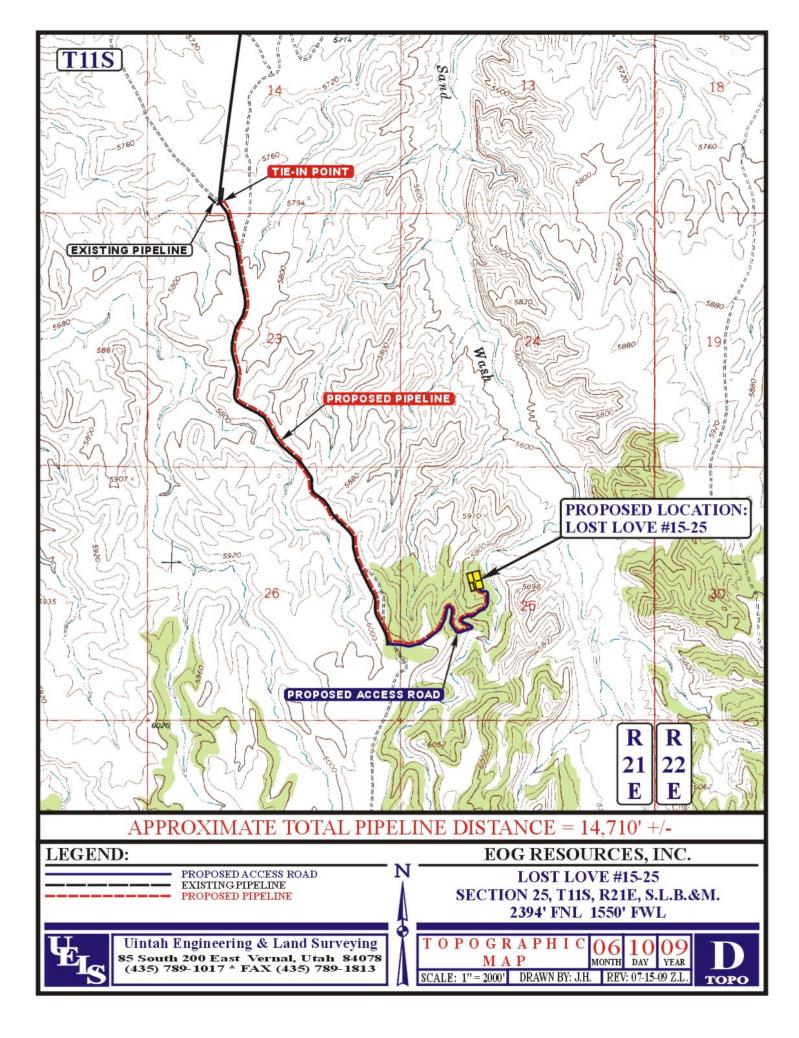
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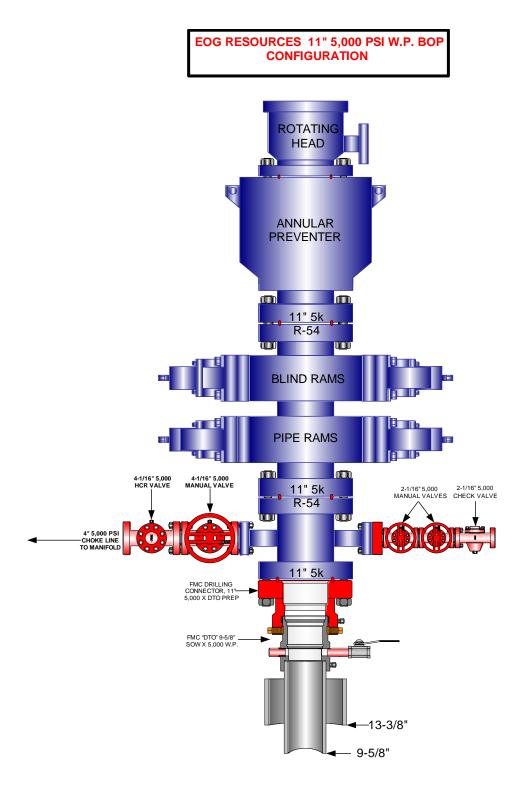
INC.







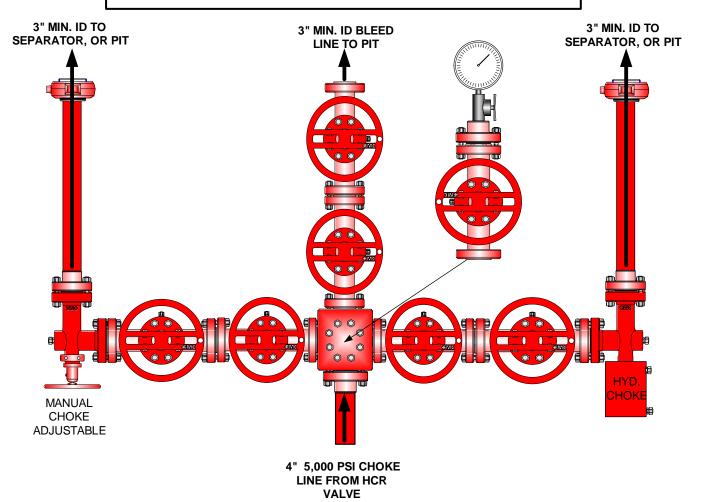




PAGE 1 OF 2

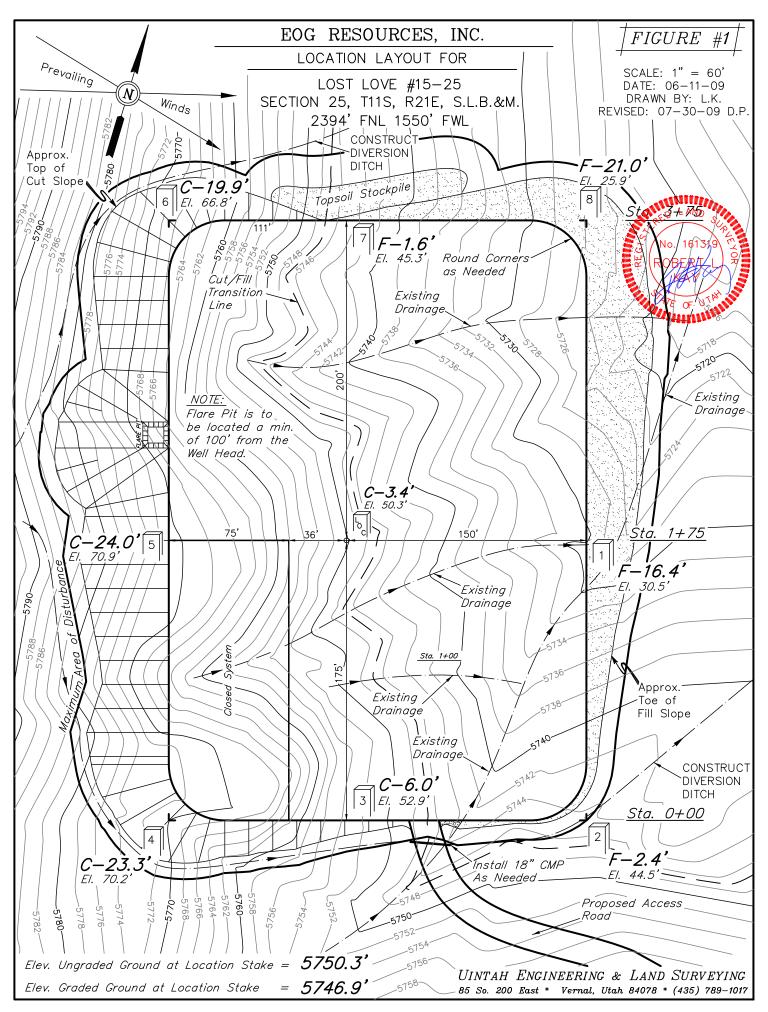
EOG RESOURCES CHOKE MANIFOLD CONFIGURATION W/ 5,000 PSI WP VALVES

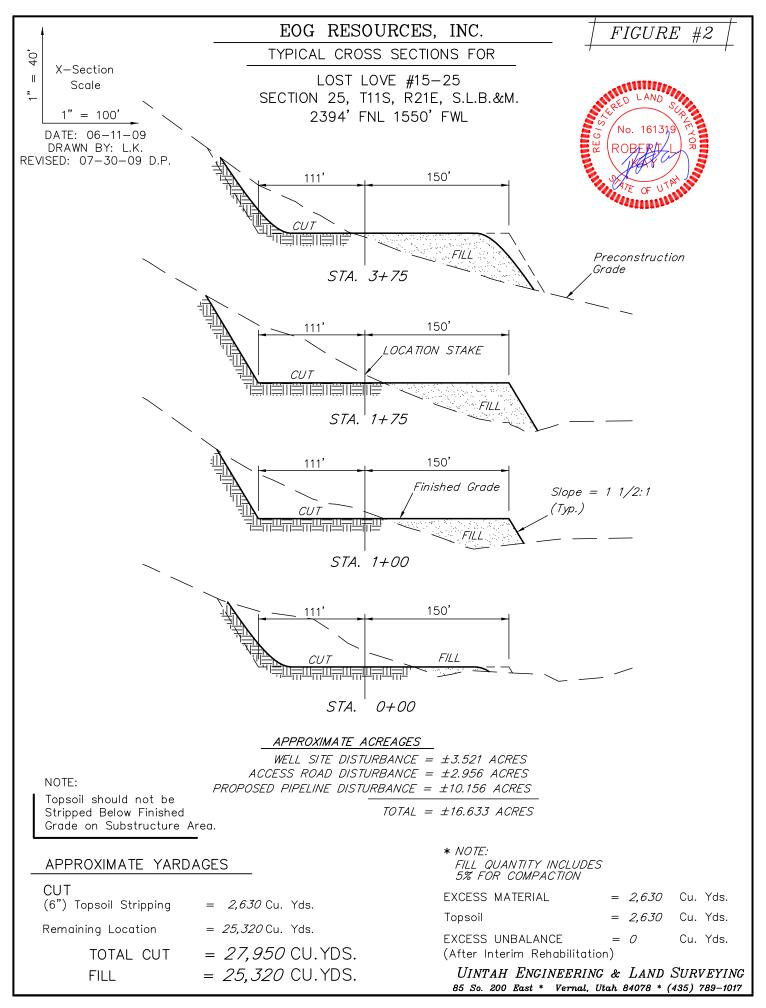
PAGE 2 0F 2

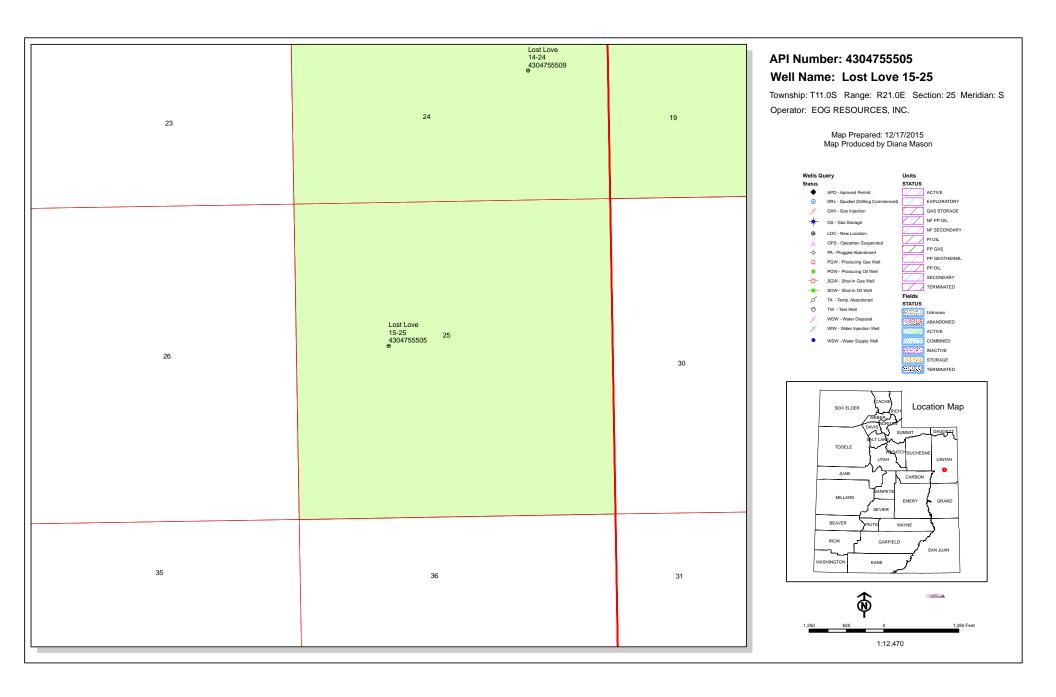


Testing Procedure:

- 1. BOP will be tested with a professional tester to conform to Onshore Order #2.
- 2. Blind and Pipe rams will be tested to rated working pressure, 5,000 psi.
- 3. Annular Preventer will be tested to 50% working pressure, 2,500 psi. Casing will be tested to 0.22 psi / ft. or 1,500 psi. Not to exceed 70% of burst strength, whichever is greater.
- 4. All lines subject to well pressure will be tested to the same pressure as blind and pipe rams.
- 5. All BOPE specifications and configurations will meet Onshore Order #2 requirements.







API Well Number: 43047555050000

WORKSHEET APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 12/11/2015 **API NO. ASSIGNED:** 43047555050000

WELL NAME: Lost Love 15-25

OPERATOR: EOG RESOURCES, INC. (N9550) PHONE NUMBER: 435 781-9145

CONTACT: Mickenzie Larsen

PROPOSED LOCATION: SENW 25 110S 210E Permit Tech Review:

✓

SURFACE: 2394 FNL 1550 FWL Engineering Review:

BOTTOM: 2394 FNL 1550 FWL Geology Review:

✓

COUNTY: UINTAH

LATITUDE: 39.83228 LONGITUDE: -109.51983 UTM SURF EASTINGS: 626658.00 NORTHINGS: 4410190.00

FIELD NAME: UNDESIGNATED LEASE TYPE: 1 - Federal

LEASE NUMBER: UTU8346 PROPOSED PRODUCING FORMATION(S): MESA VERDE

SURFACE OWNER: 1 - Federal COALBED METHANE: NO

RECEIVED AND/OR REVIEWED:

✓ PLAT

✓ R649-2-3.

✓ Bond: FEDERAL - NM2308

✓ Unit:

— Potash

— Oil Shale 190-5

— Oil Shale 190-3

— Oil Shale 190-13

✓ Water Permit: 49-225

✓ Board Cause No: Cause 210-05

RDCC Review: Effective Date: 10/5/2009

Fee Surface Agreement Siting: 460' Fr Exterior Drilling Unit Boundary

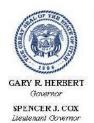
Intent to Commingle R649-3-11. Directional Drill

Commingling Approved

Comments: Presite Completed

Stipulations: 4 - Federal Approval - dmason

RECEIVED: January 04, 2016



State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

Permit To Drill

Well Name: Lost Love 15-25 **API Well Number:** 43047555050000

Lease Number: UTU8346 Surface Owner: FEDERAL Approval Date: 1/4/2016

Issued to:

EOG RESOURCES, INC., 600 17th Street Ste 1000N, Denver, CO 80202

Authority:

Pursuant to Utah Code Ann. 40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 210-05. The expected producing formation or pool is the MESA VERDE Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

Duration:

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

General:

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

Conditions of Approval:

State approval of this well does not supercede the required federal approval, which must be obtained prior to drilling.

Notification Requirements:

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

• Within 24 hours following the spudding of the well - contact Alexis Huefner at 801-538-5302

(please leave a voicemail message if not available)

OR

submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website

at http://oilgas.ogm.utah.gov

Reporting Requirements:

All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- Entity Action Form (Form 6) due within 5 days of spudding the well
- Monthly Status Report (Form 9) due by 5th day of the following calendar month
 - Requests to Change Plans (Form 9) due prior to implementation
 - Written Notice of Emergency Changes (Form 9) due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) due prior to implementation
 - Report of Water Encountered (Form 7) due within 30 days after completion
- Well Completion Report (Form 8) due within 30 days after completion or plugging

Approved By:

For John Rogers Associate Director, Oil & Gas Sundry Number: 77187 API Well Number: 43047555050000

	STATE OF UTAH		FORM 9			
	DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MININ		5.LEASE DESIGNATION AND SERIAL NUMBER UTU8346			
SUNDF	RY NOTICES AND REPORTS OF	N WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:			
	oposals to drill new wells, significantly de reenter plugged wells, or to drill horizonta n for such proposals.		7.UNIT or CA AGREEMENT NAME:			
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: Lost Love 15-25			
2. NAME OF OPERATOR: EOG RESOURCES, INC.			9. API NUMBER: 43047555050000			
3. ADDRESS OF OPERATOR: 600 17th Street Ste 1000N		HONE NUMBER: 5 781-9111 Ext	9. FIELD and POOL or WILDCAT: UNDESIGNATED			
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2394 FNL 1550 FWL			COUNTY: UINTAH			
QTR/QTR, SECTION, TOWNS	HIP, RANGE, MERIDIAN: 25 Township: 11.0S Range: 21.0E Meridian	n: S	STATE: UTAH			
11. CHEC	K APPROPRIATE BOXES TO INDICATE	NATURE OF NOTICE, REPOR	RT, OR OTHER DATA			
TYPE OF SUBMISSION		TYPE OF ACTION				
	ACIDIZE	ALTER CASING	CASING REPAIR			
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME			
1/4/2017	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE			
SUBSEQUENT REPORT	DEEPEN	FRACTURE TREAT	☐ NEW CONSTRUCTION			
Date of Work Completion:	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK			
		1				
SPUD REPORT Date of Spud:	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION			
Date or Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON			
	L TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL			
DRILLING REPORT Report Date:	WATER SHUTOFF	SI TA STATUS EXTENSION	✓ APD EXTENSION			
	WILDCAT WELL DETERMINATION	OTHER	OTHER:			
I .	COMPLETED OPERATIONS. Clearly show all nc. respectfully requests the AF well be extended for one yea	PD for the referenced	Approved by the UamuBiyi6ib,r20fl 7 Oil, Gas and Mining Date: By:			
NAME (PLEASE PRINT) Wes Paine	PHONE NUMBER 303-262-9886	TITLE Regulatory Specialist				
SIGNATURE	000 202 3000	DATE				
N/A		1/4/2017				

Sundry Number: 77187 API Well Number: 43047555050000



The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

Request for Permit Extension Validation Well Number 43047555050000

API: 43047555050000 Well Name: Lost Love 15-25

Location: 2394 FNL 1550 FWL QTR SENW SEC 25 TWNP 110S RNG 210E MER S

Company Permit Issued to: EOG RESOURCES, INC.

Date Original Permit Issued: 1/4/2016

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

• If located on private land, has the ownership changed, if so, has the surface agreement been updated? Yes No
• Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location? Yes No
 Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well? Yes No
• Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location? (Yes (No
• Has the approved source of water for drilling changed? 🔘 Yes 🌘 No
• Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? (Yes (No
• Is bonding still in place, which covers this proposed well? Yes No
nature: Wes Paine Date: 1/4/2017

Sig

Title: Regulatory Specialist Representing: EOG RESOURCES, INC.